

## REMARKS

Claims 1-8 and 10-19, as amended, and new claim 21 remain pending herein.

The Applicant appreciates the Examiner's indication of allowable subject matter and that Claim 20 would be allowable if rewritten to independent form. New claim 21 is submitted corresponding to claim 20 in independent form. The Applicant further appreciates the consideration extended to the undersigned attorney in the interview conducted September 1, 2005.

During the interview, inquiry was made regarding the word "document" in the specification. The applicant notes that the specification defines a "sentence" on page 1 as a plurality of words, and it defines a "document" as an assembly of a plurality of sentences. The pending claims use the term "document" with the meaning given in the specification. In this regard, a document is not merely a string of arbitrary or isolated characters.

Certain claims have been amended to clarify that character joint probabilities are calculated substantially automatically without human tagging. The term "substantially automatically" does not mean that a system or process would be totally free of all human intervention. It should be read in combination with the phrase "without human tagging" to exclude wholesale human identification of word-separation boundaries. It would still be within the scope of such pending claims if, for example, a human were to exercise managerial control over a system or method, such as initiating or interrupting document processing, or managing documents within a database of documents.

1. Claims 1-2, 4-5 and 7-8 were rejected under §102(e) over Halstead Jr. et al U.S. Patent 5,963,893 ("Halstead '893") citing, among other passages, col. 8, lines 49-65. As presently understood, Halstead '893 develops what are called intra-SPB morpheme bigram

probabilities. Without taking any position on whether such probabilities are character joint probabilities, Halstead '893 develops intra-SPB morpheme bigram probabilities from tagged corpora. Tagged corpora are known in the art as a collection of text materials that have been extensively tagged by human intervention to indicate certain types of context boundaries including word boundaries.

Applicant's claimed invention includes means and methods that include substantially automatic calculation from documents without human tagging. Thus, Halstead '893 fails to disclose all elements of Applicant's claimed invention, and it is not a proper basis for rejection of Applicant's claims under §102.

2. Claims 3 and 10-17 were rejected under §103(a) over Halstead '893 in view of Abe et al. U.S. Patent 6,173,253 ("Abe '253"). The Office Action states that Abe '253 discloses a method calculating an appearance probability of a specific character string appearing immediately before another specific character, citing col. 6, line 35 through col. 7, line 10. As presently understood, Abe '253 operates on partially completed sentences input with a pen or a comparable medium.

The cited passage of Abe '253 refers to a dictionary of transactions discussed with reference to Fig. 3 of that patent (*see* col. 5, line 19 through col. 6, line 5). An essential part of the process appears to be steps 302 to 305. Step 302 is a morphological analysis based on pre-stored rules to decompose a user-defined sentence into words. Steps 304 and 305 check words and their connections to form a vocabulary dictionary (131) and a dictionary of transitions (132). Without taking any position on whether information in such dictionaries includes character joint probabilities, the dictionary building process is not performed on documents to undergo segmentation. Thus Abe '253 relies on known words, while the applicant's invention as claimed

in claims 3 and 10-17 determines division points between words based on joint character probabilities from an entered but not-yet-divided document in a database.

A benefit of the present invention is the avoidance of tagged corpora (as in Halstead '893) and the dictionary building process (as in Abe '253). Applicant's claimed invention includes means and methods that include substantially automatic calculation of joint character probabilities from documents to be segmented. There is no disclosure or teaching in either Abe '253 or Holstead '893 which would suggest the desirability of combining any specific portions of the references effectively to anticipate or render obvious applicant's claimed invention. Even the presumed, arguendo combination of Halstead '893 with Abe '253 would fail to achieve the Applicant's claimed invention.

For the foregoing reasons reconsideration and withdrawal of this rejection are respectfully requested.

All claims 1-8, 10-19, and 21 are now in proper form and patentably distinguished over all grounds of rejection stated in the Office Action. Thus, allowance of all claims is respectfully solicited.

Should the Examiner have any question concerning this Amendment or the application as a whole, he is invited to telephone applicants' undersigned attorney at the number listed below.

The Commissioner is hereby authorized to charge any missing or insufficient fee(s) or credit any overpayment, to Deposit Account No. 19-4293.

Respectfully submitted,

STEPTOE & JOHNSON, LLP



Roger W. Parkhurst, Reg. No. 25,177  
Stuart T. F. Huang, Reg. No. 34,184

Date: November 14, 2005

1330 Connecticut Avenue, N.W.  
Washington, DC 20036  
Tel: (202) 429-8056;  
Fax: (202) 429-3902